

art, as the granule size range is small enough to easily penetrate into the vents of the molding inserts."

Spire
Please insert the following new paragraph after the paragraph ending at page 4, line 32:

?
o
"According to an aspect of the invention, a method for cleaning an injection mold is provided, comprising the steps of configuring the operating controls of a dry ice blasting system to produce a cleaner flow of dry ice granules entrained in a gas with the dry ice granules ranging in size from approximately 0.005 to 0.040 inches in diameter, at a gas-to-dry ice mass ratio ranging from approximately 2.0 to 3.5, and at a gas flow rate ranging from approximately 3 to 50 SCFM; positioning a nozzle tip of a hand tool at a distance of preferably between 0.5 and 1.5 inches from a surface to be cleaned; and triggering operation of the blasting system to initiate the cleaner flow."

N.E.
Check
Wiss
Please insert the following new paragraphs after the paragraph ending at page 5, line 16:

"In addition, a valve to trigger the gas flow is included on the hand tool.

In addition, the cleaning system is suitable for cleaning the vents of a preform mold."

Please amend the paragraphs at page 7, line 4, to page 8, line 6, to read as follows:

"Referring to FIG. 1, a cleaning operation of a preform mold 1 is depicted using a dry ice blasting system 21. The preform mold 1 is shown in an open position with a suitable distance between the respective cold 2 and hot halves 25 with the mold ejection mechanism 5 positioned to reveal core vents 13 and corresponding sealing face 6 on the neck ring pair 11A & 11B. The nozzle clearance 29 for the hand tool nozzle 17 for the majority of multi-cavity preform molds 1 is in the range of 0.20 to 0.60 inches, with 0.40 being typical. The nozzle construction employs a venturi construction to accelerate the dry ice particles. In order to avoid clogging in the nozzle 17 the dry ice granule size must be less than the diameter at the narrowest region of the nozzle at its throat. It has been determined that the optimal granule size for a low entrained or cleaner flow stream 15 is preferably between 0.005 and 0.040 inches in diameter, with particle sizes of less than 0.020 being typical. The corresponding gas-to-ice mass ratio preferably being between 2.0 and 3.5, with a value of 3.0 being typical. A low entrained or cleaner flow stream has a gas flow rate preferably between 3 and 50 SCFM, with a value of 25 being typical. For optimal cleaning the cleaning distance 31 between the nozzle tip and the surface to be cleaned (e.g. vent 13) is

preferably between 0.5 and 1.5 inches, with a value of 1.0 inch being typical. In order to accommodate the cleaning distance 31 and not have the pistol handle of the hand tool 19 interfere with the neck rings 11A & 11B, the nozzle length is preferably between 2.5 and 12.0 inches, with a length of 6.0 inches being typical.

The hand tool 19 further includes a pistol grip 33 that has a pivoting connection with the nozzle 17 wherein the angular inclination of said nozzle to said pistol grip may be incrementally adjusted. The hand tool further includes at least one light 20 positioned to cast light in the direction of the nozzle discharge, the light is preferably a light emitting diode. In addition, a valve to trigger the gas flow is included on the hand tool."

IN THE CLAIMS:

Please cancel Claims 1-21 without prejudice to or disclaimer of the subject matter therein.

Please add new Claims 22-28 as follows:

--22. (Newly Added) A method for the cleaning of an injection mold comprising the steps of:

configuring the operating controls of a dry ice blasting system to produce a cleaner flow comprising dry ice granules entrained in a gas with the dry ice granules ranging in size

from approximately 0.005 to 0.040 inches in diameter, at a gas-to-dry ice mass ratio ranging from approximately 2.0 to 3.5, and at a gas flow rate ranging from approximately 3 to 50 SCFM; and positioning a nozzle tip of a hand tool from a preform surface to be cleaned;

triggering the operation of the blasting system to initiate the cleaner flow.

23. (Newly Added) The method of cleaning an injection mold according to Claim 1, wherein, the nozzle tip of the hand tool is positioned at a distance ranging from 0.5 and 1.5 inches from the preform surface to be cleaned.

24. (Newly Added) The method of cleaning an injection mold according to Claim 2, further comprising the steps of opening the injection mold, and positioning a mold ejection mechanism to expose the preform surface to be cleaned.

25. (Newly Added) The method of cleaning an injection mold according to Claim 3, wherein, in the step of configuring the operating controls, the gas to dry ice ratio is kept at approximately 3.0 for cleaning a vent of the preform.